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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/530,558
Filing Date: April 07, 2005
Appellant(s): TAKEI ET AL.

Harris A. Pitlick
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 28, 2008 appealing from the Office action mailed November 30, 2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 8-10 and 12-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

1) The claims recite the limitation "a coating composition having a viscosity at 30°C of 300cP through 50,000 cP and including at least on monomer (d) and at least on photopolymerization initiator (e)...a surface smoothing composition...one polyfunctional monomer (f)".

The appearance of mere indistinct words in a specification or a claim (here the word “monomer”), even an original claim, does not necessarily satisfy the written description requirement. The disclosure must allow one skilled in the art to visualize or recognize the identity of the subject matter purportedly described. Univ. of Rochester v. G.D. Searle, 69 USPQ2d 1886, 1892 (CAFC 2004). Based on the instant claims reciting a photopolymerization initiator for each composition, the monomers appear to be photopolymerizable monomers yet the claim recites “monomer” that may encompass “any monomer” and not just those that are photopolymerizable. In the case of the smoothing composition, the monomer (f) “includes” monomers having three or more olefin double bonds but does not disclose examples of what this encompasses such as the structure, the size, what other groups may be included on the monomer, what other types of monomers are included or if the monomer is photopolymerizable. In regards to the coating composition, it appears the “monomer” is a hydrophilic, hydrophobic monomer or a mixture of the two. The examples of the hydrophilic monomer include methacrylic based monomers with a solubility at 25°C of 10 weight % or more and the hydrophobic monomers are esters with a solubility at 25°C of 10 weight % or less. The specification does not give other examples of hydrophilic monomers or hydrophobic monomers to support the term “monomer” nor does it disclose if the monomers are photopolymerizable monomers considering a photopolymerization initiator is included in the composition.

2) The claims recite the limitation “at least one acidic monomer”. The instant specification discloses the acidic monomer comprises an acidic group “such as a phosphoric group, a pyrophosphoric group, a thiophosphoric group, a carboxylic group or a sulfonic group and also has a polymerizable unsaturated group such as an acryloyl group, a methacryloyl group, a vinyl group or a vinylbenzyl group. In particular, the monomers have an acryloyl group or a methacryloyl group as the unsaturated group is preferred.” Although the specification gives specific examples of acryloyl group or a methacryloyl comprising monomer, it does not disclose examples of other monomers or indicate what other types of monomers are acidic monomers other than the four classes disclosed above. It also does not disclose monomers comprising several acidic groups or indication how one would determine how many acidic groups are encompassed by “at least one acidic group”.

(10) Response to Argument

Applicant's Arguments

Applicant argues the case law used to support the pending rejection, University of Rochester v. G.D. Searle, 69 USPQ2d 1886, 1892 (Fed. Cir. 2004) is inapposite herein. Applicants have described many examples for each of the monomeric components of the various compositions recited in the instant claims. To address the Examiner's assertion that the recitation of monomer with out the recitation of photopolymerizable monomer encompasses all monomers the Applicant asserts, one of skill in the art would understand that when a photopolymerization initiator was in the

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compositions that a photopolymerizable monomer is also included in the compositions thereby there would be no need to recite the presence of photopolymerizable monomer in the instant claims. Furthermore inoperable embodiments would not be included in the claims. Applicant also asserts that various examples are given in the specification that support the recitation of monomer in regards to the surface smoothing composition and therefore the Examiner's assertion that the monomers are not characterized is erroneous. One skilled in the art would be able to select applicable monomers based on the monomers exemplified. In regards to the monomer of the coating composition, Applicant asserts examples of monomers are described in the specification. Since the coating compositions require at least one photopolymerization inhibitor (e), it necessarily follows that at least one monomer (d) necessarily includes monomers which are photopolymerizable. In regards to the term "at least one acidic group-containing monomer (a)", this means there may be more than one monomer comprising one or more acidic groups. The compounds are exemplified in the specification and are described as securing the adhesiveness to the teeth. The compounds comply with both written description and enablement.

Examiner's Response

The following response to Applicant's Arguments are now being analyzed in accordance with the Guidelines for Examination of Patent Applications under the 35 USC 112, paragraph 1, "Written Description Requirement (attached as Appendix A – Fed. Reg. 66(4):1103).

According to those guidelines, the examination of patent claims for compliance with the Written Description Requirement should include:

1. A determination as to what the claim as a whole covers.
2. A full review of the application to understand how the applicant provides support for the claimed invention including each element and/or step. This review includes comparing the claim scope with the scope of the description.
3. A determination as to whether one skilled in the art would recognize that the Applicant was in possession of the claimed invention as a whole at the time of filing. This determination should include the following considerations:
 4. For each claim drawn to a single embodiment or species, consider the above factors in regard to that embodiment or species to determine whether one of ordinary skill in the art would recognize that the applicant was in possession of the species or embodiment at the time of filing.
 5. For each claim drawn to a genus, consider each of the above factors to determine whether there is disclosure of a representative number of species which would lead one skilled in the art to conclude that the applicant was in possession of the claimed invention. The number of species required to represent a genus will vary, depending on the level of skill and knowledge in the art and the variability among the claimed genus. For instance, fewer species will be required where the skill and knowledge in the art is high, and more species will be required where the claimed genus is highly variable.

1) Breadth of the Claims. The claims are drawn to a kit and a method comprising three different compositions. The three compositions comprise monomers that may be used in more than one of the compositions of the recited kit. For example, the coating compositions include a monomer and therefore the recitation of the monomer could include a polyfunctional monomer.

2) Support by the Specification. The specification provides support for the claims but only list a few species relative to the species that are encompassed by the term "monomer". As mentioned above monomers that may be used for the primer compositions may also be used for the coating composition because the coating compositions comprises at least one monomer which includes monomers comprising an acidic group as recited for the primer composition. Although the specification gives examples of monomers for each composition, there is no real distinction drawn between the monomers used in the primer compositions and the coating compositions. Therefore there is no real distinction between the compositions themselves.

When looking for guidance from the instant specification, the terms "smoothing" and "coating" appear to be interchangeable because they comprise monomers that have overlapping functions, i.e., those that may be used in both the smoothing composition and the coating compositions. Any coating will "smooth" the surface onto which it is deposited, so it is unclear what correlation between monomer structure and the "smoothing" function, versus a different correlation between monomer structure and the "coating" function. The fact that all the disclosed monomers appear to overlap substantially in structure (e.g., most if not all are acrylates) is evidence that no such correlation has been clearly set forth.

3) Recognition that Applicant had Possession of the Claimed Invention.

Applicant does provide actual reduction to practice with the disclosure of working examples. Although the specification list species of monomers that may be used for the

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compositions, it does not provide a full or partial structure of the monomers, nor does it provide a core structure of the monomers that must be present in order for the monomer to be suited for the desired function of each composition. All the monomers of the instant disclosure appear to be acrylates or derivatives of acrylates and there is no guidance such as what type of structure or functional group other than the general recitation of having an acidic group or polyfunctional, is necessary to choose monomers, other than acrylates, which are suitable for each type of composition recited in the claims. The functions of the monomers are identified by the type of compositions in which they are used, such as smoothing, primer and coating. There is sufficient guidance as to make the compositions once suitable monomers have been identified for each of the compositions. The predictability of the art is high and there are many possible interactions yet this is counteracted by complete lack of direction in regards to how to determine monomers other than those listed that would be suitable to make each composition or more specifically what makes the each composition truly distinct from one another.

4) Single Embodiments or Species. There appear to be no claims drawn to a single species. All the claims recite monomers in general terms.

5) Representative number of Species for Genus Claims. The Examiner acknowledges the generic representative set of monomers disclosed by Applicant for each of the compositions. What Applicant fails to disclose is how to choose monomers

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that may be used for each of the compositions, such as how to choose a monomer that would satisfy the function of making a surface smoothing composition, especially considering that the monomers that may be used for the surface smoothing composition may be used for the coating composition. In view of Applicant's disclosure, monomers used in the surface smoothing compositions may be used in the coating compositions and therefore there is no clear line of demarcation and one of skill in the art would not be able to discern how to choose which monomers are suitable for each composition. Although the coating composition does have a limitation of viscosity, there is no such limitation in the surface smoothing compositions. Therefore, based on the wording of the claims the coating composition may be the same as the surface smoothing composition. Applicant also fails to distinguish if the monomer is a photopolymerizable monomer or not. Although Applicant argues that one of ordinary skill in the art would conclude that a photopolymerizable monomer is included in the compositions, because of the open language that is used in the claims, one would not be able to determine if the recited monomer was the photopolymerizable monomer or if there was an additional monomer in the compositions that acted as a photopolymerizable monomer. Furthermore although Applicant provides a listing of monomers, it appears that the specification only provides a limited number of compositions, which do not appear to be a representative set of all the combination of compositions encompassed by the instant claims. Ultimately there is not enough guidance to decipher monomers or in this case the acrylates, purely by function, such as being a smoothing agent or a coating agent and how the two compositions are distinct from one another.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Lezah W Roberts/
Examiner, Art Unit 1612

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